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ABSTRACT

This investigation studied the development of the form and function of negative sentences, and how it relates to the input on negation that children receive from their parents. The data came from three children: two from a previous study (Bellugi) and one the son of the investigators. A detailed analysis was carried out of the syntactic form and semantic function of all clearly interpretable multi-word negatives in the children's speech and in the parents' speech for the first five samples. Analysis of the forms and functions of the negative sentences of the three children, up to a mean length of utternace of 2.6, and of their parents, concentrated on rejection and denial negatives. The results revealed clear differences in the use of negatives by the parents that are reflected in the speech of their children. It is concluded that the results of this study provide little evidence for the idea that the use of NEG+S negatives, that is a negative marker outside the kernel sentence, represents a general stage in the acquisition of negation. The pattern of mastery of negation reflects both the predominant functions to which the child puts the negative and the frequency of different forms and functions in the parental speech. (AMH)

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FORM AND FUNCTION IN THE DEVELOPMENT OF SENTENCE NEGATION[1]

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Over the past fifteen years there have been several attempts to characterize the acquisition of sentence negation in terms of general stages in the mastery of its syntactic form. From her longitudinal study of three children, Bellugi (1967) suggested that the early stages of acquisition of the negative in English parallel the stages in the derivation of negative sentences in standard transformational grammar (Chomsky, 1965). The deep structure of the negative as proposed by Chomsky consisted of a negative marker outside of the kernel sentence (NEG + S); most of the earliest multi-word negatives produced by the children in Bellugi's study consisted of a simple proposition preceded by no or not. The next step in the derivation of the negative in English involved placing the negative marker adjacent to the verb stem to be modified; and in the second stage of negation (mean length of utterance 2.8 to 3.0) Bellugi observed that the children used four negative markers: no, not, can't and don't, now inserted into appropriate places within their sentences. At this stage can't and don't appeared to function as unanalyzed wholes, and not as negated auxiliaries, since the positive forms can and do were not yet present in the children's speech. Only when the children's MLU's were in the region 3.4 to 3.9 did many different auxiliaries begin to appear in positive and negative form, suggesting that the children had mastered most of the elementary syntax of negation.

Subsequent speculation about possible universal aspects of children's acquisition of negation has focussed on Bellugi's first two stages. Based on Bellugi's findings, his own observations of a Japanese child (McNeill and McNeill, 1968) and a few examples from Russian (Slobin, 1966) and French (Grégoire, 1937), McNeill (1970) concluded that the development of sentence negation universally begins with a negative marker placed external to the sentence. He considered this schema to be a part of the child's innate knowledge of linguistic structure. More recently, Wode (1977) summarized data from German, Swedish and English and proposed four early stages in the acquisition of negation:
(i) Single word negatives
(ii) Multiword negatives with the negative marker in initial position but anaphoric in meaning. The negative element does not negate the proposition that follows it, but refers back to a previous utterance of the child or the person talking to him.
(iii) Multiword negatives in which the negative element is still in initial position but is now nonanaphoric and does negate the rest of the utterance that follows. Wode suggests that this stage represents not an innate schema but rather an overgeneralization of the anaphoric

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negative form from stage (ii). Evidence for this comes from his observation that children tend to use the anaphoric negative morphemes in this stage, not the morphemes that adult speakers use for nonanaphoric negation. Thus English children predominantly use no rather than not or n't, German children use nein rather than nicht or kein, and Swedish children use nej or nä rather than inte. (iv) In the fourth stage the appropriate negative morpheme is used in a position internal to the sentence.

The universality of such stages has been questioned, however. Park (1979) pointed out that Wode did not present any distributional analysis of the different forms of the negative in his children's speech. His analysis, particularly of the developmental order and the nature of stages (ii) and (iii), relies instead on a handful of examples from very few children. Park himself presents distributional data on early negative sentences in one High German and two Swiss German-speaking children which do not support Wode's sequence of stages.

The crucial evidence for an early stage of development that parallels the NEG + S deep structure form comes from initial-negative sentences in which the subject is expressed:

No the sun shining	"The sun's not shining" (Adam)
No a boy bed	"The boy's not in the bed" (Adam)
No Mommy giving Baby Sarah milk	"Mommy musn't give baby Sarah milk" (Eve)
Not Fraser read it	"Fraser musn't read it" (Eve)

If the subject is not expressed, then it is difficult to decide between two alternatives: the subject may be deleted from NEG + S, or, the subject may be deleted from a conventional Subject + NEG + Predicate construction (Bloom, 1970). Bloom found some such critical sentences in her longitudinal study of three children, but the best interpretation was that the initial negative morpheme was anaphoric, negating a previous proposition. Bloom did not find any examples of NEG + Subject + Predicate that were nonanaphoric in nature.

Bloom expanded on previous work on negation by recording the semantic functions that the negative sentences served. She found a developmental progression in these functions, with nonexistence and disappearance being the first to occur, followed by rejection of some existing or imminent situation or event and only later by denial of the truth value of a preceding utterance. In general the forms became syntactically elaborated in the same order as the functions first appeared in the children's speech, nonexistence then rejection and finally denial.

The purpose of the present investigation was to study the development of the form and function of negative sentences, and how it relates

to the input on negation that children receive from their parents.

Method

The data in the present study came from three children: two of the subjects in Bellugi's longitudinal study, Adam and Eve, and from our own son Nicholas. Adam and Eve were recorded in free play with their mothers for two hours every two or three weeks (Brown, 1973), with the children's utterances and the mothers' speech being transcribed together with occasional notes on context.[3] We kept a record of all of the multi-word negative sentences produced by Nicholas in our presence between the ages of 23 and 29 months. A gloss of the apparent meaning of the utterance and the context in which it was made were also noted at the time of each utterance. This record was supplemented by three 45 minute recordings of Nicholas' interaction with us (at 24, 25 and 28 months) and 200-utterance transcripts of Nicholas' speech at 27 and 29 months. Nicholas' MLU was calculated for each of these periods, while the MLU for Adam and Eve was available for each sample of their speech from Bellugi (1967). A detailed analysis was carried out of the syntactic form and semantic function of all clearly interpretable multi-word negatives in the speech of Adam and Eve for the first eight samples (Adam age 27 to 31 months, MLU: 1.9-2.5; Eve age 18 to 22 months, MLU 1.4 to 2.6), and for Nicholas between the ages of 23 and 29 months, MLU 1.8 to 3.4 The form and function of all multiword negatives in the speech of the mothers of Adam and Eve were also analyzed for the first 5 samples. A similar analysis was performed on the negatives in the three samples of our own speech to Nicholas. Table 1 shows the definitions of the functions that were used in scoring.

Results

In the data from Adam and Eve there were few unambiguously interpretable initial-no/not sentences in which the subject was present. In several cases the no was at least plausibly anaphoric in function, and that left only three sentences from Adam and two from Eve in which the sentence following the initial no was clearly negated by it.[4]

In contrast, Nicholas produced a large number of initial-no/not sentences with the subject expressed over a period of some months. These are shown in Table 2. Most striking about these initial-no/not sentences is the fact that all except one express the semantic function of rejection. Sentences denying the truth of presupposed or expressed propositions were less frequent and tended to have the negative marker internal to the sentence. In the light of this finding we performed a distributional analysis of the forms and functions of the negative sentences of all three children up to an MLU of 2.6 (samples 1-8 for Adam and Eve). The analysis concentrated on rejection and denial negatives since these were the most reliably scored and were relatively frequent in the children's speech. Table 3 shows the results of this analysis for the three children and for the same analysis for their respective parents. For Adam and Eve and their mothers it was possible

TABLE 1 Definitions of several different semantic functions of the negative.

Nonexistence	Some object does not exist in the context, or the child does not see it, but there is reason to expect it to be there. (e.g., Adam expects to find a familiar toy in the experimenter's bag but it is not there. A: "No cowboy innere.")
Disappearance	Some object that was in the context is suddenly hidden from view or ceases to exist. (e.g., Eve finishes her juice. E: "Allgone juice")
Nonoccurrence	An expected action or event does not occur. (e.g., Nicholas puts a windup toy on the table but it does not move. N: "No walk")
Cessation	A movement or action stops. (e.g., Nicholas's windup duck stops walking. N: "No walk")
Rejection	Some object or action or event, present or proposed or imminent, is opposed by the child.(e.g., Peter is trying to get Nicholas out of bed in the morning. P: "Come on, let me get you ready". N: "No Daddy dress me.")
Denial	(Truth-functional) Child negates the truth of a proposition stated by someone else or earlier by himself. (e.g., Jill has found a puddle of liquid on the floor in the bedroom. J: "The phantom weeweer strikes again." N: "Weewee no strikes again.") (Question response) Child denies the proposition posed or presupposed by a question. (e.g., Nicholas is wearing a shirt he has earlier said was bought by Ester. P: "Did Nana buy you that shirt?" N: "No Nana bought it.")

TABLE 2 Nicholas's negative sentences with the subject specified.

		Rejection		Denial
25m	7/21	No Mummy do it.	7/17	No Nana bought it.
2.2MLU	8/2	No Daddy change you.		
	8/13	No Dampa sit on dat.	8/18	Weewee no strikes again.
26m	8/23	No Safi pat it down.		
	9/8	No my want one.	9/9	My fweetie's no gone.
		No you tuts dat.	9/10	Ticken's no need dars.
	9/18	No Eric come in my house.		
27m	9/22	Not you have muffins.	9/22	Nunu no like it.
2.6MLU	9/23	Not Sarah take it down.		It's not.
				It's not, Daddy.
	10/21	No your mummy buy one.	10/13	You no need a pooh.
28m	10/25	No Hanneke have tea.	10/28	It's not sharp.
3.1MLU	10/30	I don't like go in dat playground.		
	10/31	I don't like Daddy putting my socks on.		
	11/1	I don't like to eat for five minutes.		
	11/2	I don't like it half.		
	11/3	Not you have toast.		
		Not him come up wiff me.		
		Not him come on here.		
		Not him follow Nunu.		
	11/4	I don't want watch the news.		
	11/8	I don't want Hanneke come.	11/7	She's not having a shower.
		Not Hanneke come in my house.		She's not upstairs.
		I don't like Hanneke come.		
		I don't like Hanneke come in my house.		
	11/10	Not Mummy do her fing.		
		You can't eat it.		
	11/12	I don't like go to sleep.	11/13	I not hurting Teddy.
		I don't want to.		
		I don't like medsin.		
		You can't drink it.		
	11/16	Not Nunu have it.		
		Not you push it.		
	11/18	I don't like you cut my hair.		
29m	11/22	Not anybody eat it.		
3.4MLU		You can't have it.		
	12/5	You not put me up in my room. (1st internal no rejection)		
	12/28	Don't eat a nose. (1st spontaneous don't imperative)		

also to analyze the functions of the negative element in their anaphoric negatives.

The tabled results reveal clear differences in the use of negatives by the parents that are reflected in the speech of their children. Compared to the other parents, Adam's mother used many more negatives that denied the truth of something Adam had said, and fewer negatives that rejected some activity in progress or proposed by her child. Adam too used relatively more denial negatives and fewer rejection negatives than the other children. The results are even more striking when the forms used for the various semantic functions are examined. Adam's mother used negative sentences with no appended to the front predominantly for denial, and most of her rejection negatives were direct imperatives beginning with don't. Adam also used initial-no sentences most frequently for denial and over 60 percent of his rejection negatives were don't imperatives. In contrast, Eve's mother and the present authors used initial-no negatives for rejection, to control their children's behavior. Usually these negatives took the form of an initial no attached to a polite negative form, as in the examples in Table 4. These were produced by Peter to Nicholas over the course of a 15 minute episode during which the two of them were carving a Halloween Jack-O-Lantern from a pumkin that Peter grew especially for that purpose. Nicholas, at 28 months, had plenty of ambition and a sharp knife.

TABLE 3 Distributional analysis of rejection and denial negatives and initial-no forms in the speech of the children and their parents.

	Children's Negatives		
	Adam (77) MLU 1.9-2.5	Eve (39) MLU 1.4-2.6	Nicholas (92) MLU 1.8-2.6
% of all negative Ss			
Rejection	38	46	59
Denial	29	6	19
Initial No-Not[a]	52	67	74
% of Initial No/Not negatives			
Rejection	28	75	76
Denial	40	4	12
% of Rejections			
With initial No/Not	34	100	100
Don't imperatives	62	0	0
% of Anaphoric No Ss			
Rejection	16	81	
Denial	76	19	

Table 3 (continued)

	Parental Negatives			
	Adam's M (224)	Eve's M (255)	Peter(52)	Jill (40)
% of all negative Ss				
Rejection	29	40	63	55
Denial	42	18	23	15
Initial No/Not	27	33	42	28
% of initial No/Not negatives				
Rejection	35	61	82	73
Denial	55	32	14	27
% of Rejections				
With initial No/Not	22	50	67	36
Don't imperatives	33	10	12	23
% of Anaphoric No Ss				
Rejection	23	60		
Denial	75	38		

[a] For this distributional analysis all initial-no/not negatives were used, whether or not the subject was specified.

Comparatively few of Eve's mother's or our rejection negatives were direct imperatives beginning with don't, and neither Eve nor Nicholas used any don't imperatives during this time period. Instead, their rejection negatives were produced with an initial no or not. Around 28 to 30 months of age, Nicholas began to alternate initial-no/not sentences with the polite form "I don't want S" or "I don't like S" to reject some ongoing or imminent event, and these were the forms that predominated in our speech to him.

The same pattern of results is apparent in the anaphoric negatives of Adam and Eve and their mothers. Adam's mother used anaphoric negatives to deny some earlier statement and so did Adam; Eve's mother used anaphoric negatives to reject actions, as did Eve.

TABLE 4 Peter's negatives to Nicholas in a 15 minute interaction when Nicholas was 28 months old.

See it's not flat on the bottom.
No, you shouldn't make a hole in the bottom.
It's not a good idea to make a hole in the bottom.
No, let Daddy do it first.
No, I don't think you'll be able to cut straight.
No, don't cut too much on the front.
Why don't you cut a bit off here?
I don't want you to cut yourself with that knife.
You sure that knife's not too sharp?
No, I don't think you should put more holes in it.
No, don't cut two holes.
I hope you're not making a big mess back there.

Discussion

These results provide little support for the idea that the use of NEG + S negatives represents a general stage in the acquisition of negation. Instead, there appear to be individual differences in the parents' use of negative sentences, both in the functions that they serve and the forms used to express them. The individual styles are mirrored rather closely by the children, preserving individual differences in the proportion of the various functions of negation. The primitive forms that express these functions are plausibly derived from the parental forms in particular, parents' polite negative rejections that are reinforced with an emphatic initial no may be a source of the NEG + sentence construction adopted by some children for rejection.

The significance of these findings is two-fold. First, they provide clear evidence of the influence of parental input on a domain of grammatical constructions. Second, they suggest that the child at first preserves certain forms to express particular functions, and does not at first learn syntactic constructions independently of the functions they serve. Thus the pattern of mastery of the syntactic form of negation will reflect both the predominant functions to which the child puts the negative and the frequency of different forms and functions in the parental speech.

FOOTNOTES

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[3] We thank Roger Brown for permission to use the transcripts of Adam and Eve.

[4] The third child in Bellugi's study, Sarah, produced no initial-no sentences in which the subject was expressed.

REFERENCES

Bellugi, U. The acquisition of negation. Unpublished doctoral dissertation, Harvard University, 1967.

Bloom, L. Language development: Form and function in emerging grammars. Cambridge, Mass: M.I.T. Press, 1970.

Brown, R. A first language, the early stages. Cambridge, Mass: Harvard University Press, 1973.

Grégoire, A. L'apprentissage du langage. I. Les deux premières années. Paris: Droz, 1937.

McNeill, D. The acquisition of language. New York: Wiley, 1970.

McNeill, D. and McNeill, N. B. What does a child mean when he says 'no'? In E. M. Zale (ed.), Proceedings of the conference on language and language behavior. New York: Appleton-Century-Crofts, 1968.

Park, T. Z. Some facts on negation: Wode's four-stage developmental theory of negation revisited. Journal of Child Language, 1979, 6, 147-151.

Slobin, D. I. Abstracts of Soviet studies of child language. In F. Smith and G. A. Miller (eds.), The Genesis of Language. Cambridge, Mass.: M.I.T. Press, 1966.

Wode, H. Four early stages in the development of L1 negation. Journal of Child Language, 1977, 4, 87-102.